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10/599,047	09/18/2006	Satoshi Yamakawa	W1878.0240	3470

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EXAMINER	
RUBIN, BLAKE J	

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2457	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/599,047	YAMAKAWA ET AL.	
	Examiner	Art Unit	
	BLAKE RUBIN	2457	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is a response to communications filed February 18, 2009.

2. Claims 1-35 are pending in this application. Claims 1, 11, 21, and 31-35 are currently amended.

3. This application is a national stage entry of PCT/JP04/16947, filed November 15, 2004, which further claims foreign priority to Japanese Patent Application No.2004-080337, filed March 19, 2004.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (U.S. Patent No. 6,601,101, hereinafter Lee) in view of Davies et al (U.S. Patent No. 6,108,701, hereinafter Davies).

6. With respect to claim 1, Lee discloses an intermediate device (column 5, line 51, *switch*; Figure 1A, **120**) adapted to be provided between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing an information processing service (column 5, line 54-56) through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**)

receiving said information processing service (column 5, line 54-56), for providing an intermediate service additional to said information processing service (column 6, lines 42-45, *logic to process messages*), said intermediate device comprising:

a state information acquirer that acquires state information (column 6, lines 20-23, *receives a report*) required to maintain the state of an existing session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device (column 9, lines 2-3) for said information processing service (column 9, lines 1-2), from said first information processing device (column 9, lines 2-3) or said second information processing device (column 9, lines 2-3);

an intermediate service manager that manages, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transferring the data of said information processing service to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and

a transfer controller that maintains the state of said existing session (column 6, lines 20-23, *forwarding table*), between said intermediate device and said second information processing device (column 6, lines 18-20), establishing a new session between said intermediate device and said first information processing device (column 6, lines 25-28), and transferring said data of said information processing service using

said existing session and said new session (column 6, lines 34-38), according to said transfer rules (column 6, lines 34-38, *upon completion of the handoff*).

But does not disclose actively requesting and obtaining said state information.

However, Davies discloses actively requesting and obtaining said state information (column 8, lines 37-39).

It would have been obvious to one skilled in the art at the time the invention was made to combine the transparent hand-off protocol of Lee with the status requests of Davies. The motivation being, to improve accuracy of the method by allowing for periodic updates, of the statuses between servers and clients, across routing nodes.

7. With respect to claim 2, the combination of Lee and Davies discloses an intermediate device according to claim 1, Lee further discloses wherein said state information acquirer has a session monitor that acquires session information (column 8, lines 14-18, *EAP*) inherent in said session sent and received between said first information processing device and said second information processing device (column 8, lines 25-29), as part of said state information (column 8, lines 25-29).

8. With respect to claim 3, the combination of Lee and Davies discloses an intermediate device according to claim 1, Lee further discloses wherein said state information acquirer has an information collector that acquires service inherent information inherent in said information processing service as part of said state information (column 5, lines 66-67, *primary endpoint*) by inquiring at said first

information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*).

9. With respect to claim 4, the combination of Lee and Davies discloses an intermediate device according to claim 3, Lee further discloses wherein said state information acquirer inquires at said first information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*) about accessing object identifying information assigned to identify respective accessing objects on said first information processing device (column 5, lines 66-67, *primary endpoint*), with respect to a plurality of said accessing objects (column 6, lines 8-11, *a first or second device*), and extracts a regularity common to a plurality of obtained items of said accessing object identifying information (column 5, lines 66-67, *virtual IP address*), thereby acquiring, as part of said service inherent information, a device identifier that identifies said first information processing device having said accessing objects (column 5, lines 66-67, *virtual IP address*).

10. With respect to claim 5, the combination of Lee and Davies discloses an intermediate device according to claim 1, Lee further discloses wherein said transfer controller has an operation mode for transferring data of the existing session between said first information processing device and said second information processing device without the data of the information processing service being subjected to said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*), and

an operation mode for establishes sessions between the intermediate device and both said second information processing device and said first information processing device when a new requested session of said information processing service is requested (column 7, lines 11-14, *client request*) to be established by said second information processing device (column 7, lines 11-14, *the switch…identifies*), applying said intermediate service to the data of said information processing service using said sessions, and transferring said data of said information processing service (column 9, lines 2-5).

11. With respect to claim 6, the combination of Lee and Davies discloses an intermediate device according to claim 1, Lee further discloses wherein said state information acquirer means has cancellation controller (column 8, lines 1-4) that issues a command for temporarily nullifying (column 8, lines 2-4) and reestablishing said session to said first information processing device and said second information processing device (column 8, lines 5-8, *return a handoff*), and acquires said state information in a process of reestablishing the session according to said command (column 9, lines 18-20).

12. With respect to claim 7, the combination of Lee and Davies discloses an intermediate device according to claim 1, Lee further discloses wherein said intermediate service has contents registered (column 1, lines 62-64) in advance by an

operator (column 1, lines 62-64; column 2, lines 3-6, where *the IP stacks must be changed* requires the mediation of an operator).

13. With respect to claim 8, the combination of Lee and Davies discloses an intermediate device according to claim 7, Lee further discloses wherein said information processing service comprises a service for allowing said second information processing device to access a resource on said first information processing device (column 7, lines 11-14), and said intermediate service comprises a service for changing the access from said second information processing device to the resource on said first information processing device to convert an access destination (column 7, lines 11-14).

14. With respect to claim 9, the combination of Lee and Davies discloses an intermediate device according to claim 7, Lee further discloses wherein said information processing service comprises a service for allowing said second information processing device to access a WEB page on said first information processing device (column 6, line 48), and said intermediate service comprises a service for integrating said information processing services provided by a plurality of said first information processing devices (column 16, lines 61-64, *clients*) and providing the integrated information processing services to said second information processing device (column 16, lines 61-64, *thin server*).

15. With respect to claim 10, the combination of Lee and Davies discloses an intermediate device according to claim 1, Lee further discloses wherein when said intermediate service ends being provided (column 8, lines 2-4, *terminates its participation*), said transfer controller:

when requested to newly establish a session of said information processing service from said second information processing device (column 8, lines 4-7, *return a handoff*), transfers the data of said information processing service between said second information processing device and said first information processing device (column 8, lines 4-7, *session proceeds*), establishing a session directly between said first information processing device and said second information processing device (column 8, lines 4-7, *session proceeds*) while exempting the data from said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*); and

with respect to said information processing service which has already been provided, continuously transfers the data of said information processing service to which said intermediate service is applied using a session between itself and said first information processing device and a session between itself (column 13, lines 1-4) and said second information processing device (column 13, lines 1-4), until said second information processing device ends employing said information processing service (column 8, lines 7-8).

16. With respect to claim 11, Lee discloses a service providing method of providing an intermediate service (column 6, lines 42-45, *logic to process messages*) additional to an

information processing service (column 5, line 54-56) with an intermediate device (column 5, line 51, *switch*; Figure 1A, **120**) which is provided between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing said information processing service through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) for receiving said information processing service, comprising:

the first step of controlling said intermediate device provided between said first information processing device and said second information processing device to acquire state information (column 6, lines 20-23, *receives a report*) required to maintain the state of an existing session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device (column 9, lines 2-3) for said information processing service (column 9, lines 1-2), from said first information processing device or said second information processing device (column 9, lines 2-3);

the second step of controlling said intermediate device to generate, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transferring the data of said information processing service to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and

the third step of controlling said intermediate device to maintain the state of said existing session (column 6, lines 20-23, *forwarding table*), between said intermediate device and said second information processing device (column 6, lines 18-20), establish a new session between said intermediate device and said first information processing device (column 6, lines 25-28), and transfer said data of said information processing service using said existing session and said new session (column 6, lines 34-38), according to said transfer rules (column 6, lines 34-38, *upon completion of the handoff*).

But does not disclose actively requesting and obtaining said state information.

However, Davies discloses actively requesting and obtaining said state information (column 8, lines 37-39).

It would have been obvious to one skilled in the art at the time the invention was made to combine the transparent hand-off protocol of Lee with the status requests of Davies. The motivation being, to improve accuracy of the method by allowing for periodic updates, of the statuses between servers and clients, across routing nodes.

17. With respect to claim 12, the combination of Lee and Davies discloses a service providing method according to claim 11, Lee further discloses wherein in said first step, said intermediate device acquires session information (column 8, lines 14-18, *EAP*) inherent in said session sent and received between said first information processing device and said second information processing device (column 8, lines 25-29), as part of said state information (column 8, lines 25-29).

18. With respect to claim 13, the combination of Lee and Davies discloses a service providing method according to claim 11, Lee further discloses wherein in said first step, said intermediate device acquires service inherent information inherent in said information processing service as part of said state information (column 5, lines 66-67, *primary endpoint*) by inquiring at said first information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*).

19. With respect to claim 14, the combination of Lee and Davies discloses a service providing method according to claim 13, Lee further discloses wherein said intermediate device inquires at said first information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*) about accessing object identifying information assigned to identify respective accessing objects on said first information processing device (column 5, lines 66-67, *primary endpoint*), with respect to a plurality of said accessing objects (column 6, lines 8-11, *a first or second device*), and extracts a regularity common to a plurality of obtained items of said accessing object identifying information (column 5, lines 66-67, *virtual IP address*), thereby acquiring, as part of said service inherent information, a device identifier for identifying said first information processing device having said accessing objects (column 5, lines 66-67, *virtual IP address*).

20. With respect to claim 15, the combination of Lee and Davies discloses a service providing method according to claim 11, Lee further discloses wherein in said first step,

when all said state information which is required cannot be acquired, said intermediate device transfers data of the existing session between said first information processing device and said second information processing device without the data of said information processing service being subjected to said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*), and when a new requested session of said information processing service is requested to be established by said second information processing device (column 7, lines 11-14, *client requests*), said intermediate device establishes sessions between the intermediate device and both said second information processing device and said first information processing device (column 7, lines 11-14, *the switch…identifies*), applies said intermediate service to the data of said information processing service using said sessions, and transfers said data of said information processing service (column 9, lines 2-5).

21. With respect to claim 16, the combination of Lee and Davies discloses a service providing method according to claim 11, Lee further discloses wherein in said first step, said intermediate device issues a command for temporarily nullifying (column 8, lines 1-4) and reestablishing said session to said first information processing device and said second information processing device (column 8, lines 5-8, *return a handoff*), and acquires said state information in a process of reestablishing the session (column 9, lines 18-20).

22. With respect to claim 17, the combination of Lee and Davies discloses a service providing method according to claim 11, Lee further discloses wherein said intermediate service has contents registered in advance (column 1, lines 62-64) in said intermediate device by an operator (column 1, lines 62-64; column 2, lines 3-6, where *the IP stacks must be changed* requires the mediation of an operator).

23. With respect to claim 18, the combination of Lee and Davies discloses a service providing method according to claim 17, Lee further discloses wherein said information processing service comprises a service for allowing said second information processing device to access a resource on said first information processing device (column 7, lines 11-14), and said intermediate service comprises a service for changing the access from said second information processing device to the resource on said first information processing device to convert an access destination (column 7, lines 11-14).

24. With respect to claim 19, the combination of Lee and Davies discloses a service providing method according to claim 17, Lee further discloses wherein said information processing service comprises a service for allowing said second information processing device to access a WEB page on said first information processing device (column 6, line 48), and said intermediate service comprises a service for integrating said information processing services provided by a plurality of said first information processing devices (column 16, lines 61-64, *clients*) and providing the integrated

information processing services to said second information processing device (column 16, lines 61-64, *thin server*).

25. With respect to claim 20, Lee discloses a service providing method according to claim 11, Lee further discloses comprising:

the fourth step of, when said intermediate service ends being provided (column 8, lines 2-4, *terminates its participation*) and when requested to newly establish a session of said information processing service from said second information processing device (column 8, lines 4-7, *return a handoff*), transferring the data of said information processing service between said second information processing device and said first information processing device (column 8, lines 4-7, *session proceeds*), thereby establishing a session directly between said first information processing device and said second information processing device (column 8, lines 4-7, *session proceeds*) while exempting the data from said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*); and

the fifth step of, with respect to said information processing service which has already been provided, continuously transferring the data of said information processing service to which said intermediate service is applied using a session between said intermediate device and said first information processing device (column 13, lines 1-4) and a session between said intermediate device and said second information processing device (column 13, lines 1-4), until said second information processing device ends employing said information processing service (column 8, lines 7-8).

26. With respect to claim 21, the combination of Lee and Davies discloses a service providing program stored on a computer-readable media for providing an intermediate service (column 6, lines 42-45, *logic to process messages*) additional to an information processing service (column 5, line 54-56) executed by a computer on an intermediate device (column 5, line 51, *switch*; Figure 1A, **120**) which is provided between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing said information processing service through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) for receiving said information processing service, said program enabling said computer to perform:

a first process of controlling state information acquirer (column 6, lines 20-23, *received a report*) to acquire state information required to maintain the state of an existing session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device (column 9, lines 2-3) for said information processing service (column 9, lines 1-2), from said first information processing device or said second information processing device (column 9, lines 2-3);

a second process of controlling intermediate service manager to generate, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second

information processing device (column 20, lines 1-4), and transfer the data of said information processing service to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and

a third process of controlling transfer controller to maintain the state of said existing session (column 6, lines 20-23, *forwarding table*), between said intermediate device and said second information processing device (column 6, lines 18-20), establish a new session between said intermediate device and said first information processing device (column 6, lines 25-28), and transfer said data of said information processing service using said existing session and said new session (column 6, lines 34-38), according to said transfer rules (column 6, lines 34-38, *upon completion of the handoff*).

But does not disclose actively requesting and obtaining said state information.

However, Davies discloses actively requesting and obtaining said state information (column 8, lines 37-39).

It would have been obvious to one skilled in the art at the time the invention was made to combine the transparent hand-off protocol of Lee with the status requests of Davies. The motivation being, to improve accuracy of the method by allowing for periodic updates, of the statuses between servers and clients, across routing nodes.

27. With respect to claim 22, the combination of Lee and Davies discloses a service providing program according to claim 21, Lee further discloses wherein in said first process, session information (column 8, lines 14-18, *EAP*) inherent in said session sent and received between said first information processing device and said second

information processing device is acquired as part of said state information (column 8, lines 25-29).

28. With respect to claim 23, the combination of Lee and Davies discloses a service providing program according to claim 21, Lee further discloses wherein in said first process, service inherent information inherent in said information processing service (column 5, lines 66-67, *primary endpoint*) is acquired as part of said state information by inquiring at said first information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*).

29. With respect to claim 24, the combination of Lee and Davies discloses a service providing program according to claim 23, Lee further discloses wherein said first information processing device or said second information processing device are inquired at (column 5, lines 66-67, *intercept the initial request*) about accessing object identifying information assigned to identify respective accessing objects on said first information processing device (column 5, lines 66-67, *primary endpoint*), with respect to a plurality of said accessing objects (column 6, lines 8-11, *a first or second device*), and a regularity common to a plurality of obtained items of said accessing object identifying information are extracted (column 5, lines 66-67, *virtual IP address*), thereby acquiring, as part of said service inherent information, a device identifier for identifying said first information processing device having said accessing objects (column 5, lines 66-67, *virtual IP address*).

30. With respect to claim 25, the combination of Lee and Davies discloses a service providing program according to claim 21, Lee further discloses wherein in said first process, when all said state information which is required cannot be acquired, said transfer controller transfers data of the existing session between said first information processing device and said second information processing device without the data of said information processing service being subjected to said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*), and when a new requested session of said information processing service is requested to be established by said second information processing device (column 7, lines 11-14, *client requests*), said transfer controller establishes sessions between the transfer controller and both said second information processing device and said first information processing device (column 7, lines 11-14, *the switch…identifies*), applies said intermediate service to the data of said information processing service using said sessions, and transfers said data of said information processing service (column 9, lines 2-5).

31. With respect to claim 26, the combination of Lee and Davies discloses a service providing program according to claim 21, Lee further discloses wherein in said first process, cancellation controller issues a command for temporarily nullifying (column 8, lines 1-4) and reestablishing said session to said first information processing device and said second information processing device (column 8, lines 5-8, *return a handoff*), and

said state information acquirer acquires said state information in a process of reestablishing the session (column 9, lines 18-20).

32. With respect to claim 27, the combination of Lee and Davies discloses a service providing program according to claim 21, Lee further discloses wherein said intermediate service has contents registered in advance (column 1, lines 62-64) in said intermediate device by an operator (column 1, lines 62-64; column 2, lines 3-6, where *the IP stacks must be changed* requires the mediation of an operator)..

33. With respect to claim 28, the combination of Lee and Davies discloses a service providing program according to claim 27, Lee further discloses wherein said information processing service comprises a service for allowing said second information processing device to access a resource on said first information processing device (column 7, lines 11-14), and said intermediate service comprises a service for changing the access from said second information processing device to the resource on said first information processing device to convert an access destination (column 7, lines 11-14).

34. With respect to claim 29, the combination of Lee and Davies discloses a service providing program according to claim 27, Lee further discloses wherein said information processing service comprises a service for allowing said second information processing device to access a WEB page (column 6, line 48) on said first information processing device, and said intermediate service comprises a service for integrating said

information processing services provided by a plurality of said first information processing devices (column 16, lines 61-64, *clients*) and providing the integrated information processing services to said second information processing device (column 16, lines 61-64, *thin server*).

35. With respect to claim 30, the combination of Lee and Davies discloses a service providing program according to claim 21, Lee further discloses comprising:

a fourth process of, when said intermediate service ends being provided (column 8, lines 2-4, *terminates its participation*) and when requested to newly establish a session of said information processing service from said second information processing device (column 8, lines 4-7, *return a handoff*), controlling said transfer controller to transfer the data of said information processing service between said second information processing device and said first information processing device (column 8, lines 4-7, *session proceeds*), establishing a session directly between said first information processing device and said second information processing device (column 8, lines 4-7, *session proceeds*) while exempting the data from said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*); and

a fifth process of, with respect to said information processing service which has already been provided, controlling said transfer controller to continuously transfer the data of said information processing service to which said intermediate service is applied using a session between itself and said first information processing device (column 13, lines 1-4) and a session between itself and said second information processing device

(column 13, lines 1-4), until said second information processing device ends employing said information processing service (column 8, lines 7-8).

36. With respect to claim 31, Lee discloses a service providing program (column 5, line 54-56) stored on a computer readable media for being executed by a computer on an intermediate device (column 5, line 51, *switch*; Figure 1A, **120**) to provide an intermediate service (column 6, lines 42-45, *logic to process messages*) additional to an information processing service (column 5, line 54-56) between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing said information processing service through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) for receiving said information processing service, said program enabling said computer to perform:

a first process of acquiring state information (column 6, lines 20-23, *receives a report*) required to maintain the state of an existing session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device (column 9, lines 2-3) for said information processing service (column 9, lines 1-2), from said first information processing device or said second information processing device (column 9, lines 2-3);

a second process of generating, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first

information processing device and said second information processing device (column 20, lines 1-4), and transferring the data of said information processing service to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and

a third process of maintaining the state of said existing session (column 6, lines 20-23, *forwarding table*), between said intermediate device and said second information processing device (column 6, lines 18-20), establishing a new session between said intermediate device and said first information processing device (column 6, lines 25-28), and transferring said data of said information processing service using said existing session and said new session (column 6, lines 34-38), according to said transfer rules (column 6, lines 34-38, *upon completion of the handoff*).

But does not disclose actively requesting and obtaining said state information.

However, Davies discloses actively requesting and obtaining said state information (column 8, lines 37-39).

It would have been obvious to one skilled in the art at the time the invention was made to combine the transparent hand-off protocol of Lee with the status requests of Davies. The motivation being, to improve accuracy of the method by allowing for periodic updates, of the statuses between servers and clients, across routing nodes.

37. With respect to claim 32, Lee discloses an intermediate device (column 5, line 51, *switch*; Figure 1A, **120**) adapted to be provided between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing an information

processing service (column 6, lines 42-45, *logic to process messages*) through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) for receiving said information processing service, providing an intermediate service additional to said information processing service (column 6, lines 42-45, *logic to process messages*), said intermediate device comprising:

state information acquiring means (column 6, lines 20-23, *receives a report*) for acquiring state information required to maintain the state of an existing session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device for said information processing service (column 9, lines 2-3), from said first information processing device or said second information processing device (column 9, lines 2-3);

intermediate service managing means for generating, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transferring the data of said information processing service to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and

transfer control means for maintaining the state of said existing session (column 6, lines 20-23, *forwarding table*) between said intermediate device and said second information processing device (column 6, lines 18-20), establishing a new session

between said intermediate device and said first information processing device (column 6, lines 25-28; column 22, lines 30-43), and transferring said data of said information processing service using said existing session and said new session, according to said transfer rules (column 6, lines 34-38; column 22, lines 30-43).

But does not disclose actively requesting and obtaining said state information.

However, Davies discloses actively requesting and obtaining said state information (column 8, lines 37-39).

It would have been obvious to one skilled in the art at the time the invention was made to combine the transparent hand-off protocol of Lee with the status requests of Davies. The motivation being, to improve accuracy of the method by allowing for periodic updates, of the statuses between servers and clients, across routing nodes.

38. With respect to claim 33, Lee discloses a service providing method of providing an intermediate service (column 5, line 51, *switch*; Figure 1A, **120**) additional to an information processing service (column 5, line 54-56) with an intermediate device which is provided between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing said information processing service through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) receiving said information processing service, comprising:

the first step of controlling said intermediate device provided between said first information processing device and said second information processing device to acquire state information (column 6, lines 20-23, *receives a report*) required to maintain the

state of an existing session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device for said information processing service (column 9, lines 1-3), from said first information processing device or said second information processing device (column 9, lines 2-3);

the second step of controlling said intermediate device to generate, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transferring the data of said information processing service to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and

the third step of controlling said intermediate device to maintain the state of said existing session (column 6, lines 20-23, *forwarding table*) between said intermediate device and said second information processing device (column 6, lines 18-20), establish a new session between said intermediate device and said first information processing device (column 6, lines 25-28; column 22, lines 30-43), and transfer said data of said information processing service using said existing session and said new session, according to said transfer rules (column 6, lines 34-38; column 22, lines 30-43).

But does not disclose actively requesting and obtaining said state information.

However, Davies discloses actively requesting and obtaining said state information (column 8, lines 37-39).

It would have been obvious to one skilled in the art at the time the invention was made to combine the transparent hand-off protocol of Lee with the status requests of Davies. The motivation being, to improve accuracy of the method by allowing for periodic updates, of the statuses between servers and clients, across routing nodes.

39. With respect to claim 34, Lee discloses a service providing program (column 5, line 54-56) stored on a computer-readable media for providing an intermediate service (column 5, line 51, *switch*; Figure 1A, **120**) additional to an information processing service (column 5, line 54-56) executed by a computer on an intermediate device which is provided between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing said information processing service through a network (column 6, lines 47-48) and a second information processing (column 6, line 13, *second device*, Figure 1B, **135**) device receiving said information processing service, said program enabling said computer to perform:

a first process of controlling state information acquiring means (column 6, lines 20-23, *receives a report*) to acquire state information required to maintain the state of an existing session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device for said information processing service (column 9, lines 1-3), from said first information processing device or said second information processing device (column 9, lines 2-3);

a second process of controlling intermediate service managing means to generate, based on said state information, transfer rules (column 19, lines 63-67, *load*

balancing) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transfer the data of said information processing service to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and

a third process of controlling transfer control means to maintain the state of said existing session (column 6, lines 20-23, *forwarding table*) between said intermediate device and said second information processing device (column 6, lines 18-20), establish a new session between said intermediate device and said first information processing device (column 6, lines 25-28; column 22, lines 30-43), and transfer said data of said information processing service using said existing session and said new session, according to said transfer rules (column 6, lines 34-38; column 22, lines 30-43).

But does not disclose actively requesting and obtaining said state information.

However, Davies discloses actively requesting and obtaining said state information (column 8, lines 37-39).

It would have been obvious to one skilled in the art at the time the invention was made to combine the transparent hand-off protocol of Lee with the status requests of Davies. The motivation being, to improve accuracy of the method by allowing for periodic updates, of the statuses between servers and clients, across routing nodes.

40. With respect to claim 35, Lee discloses a service providing program stored on a computer-readable media for being executed by a computer (column 5, line 54-56) on an intermediate device (column 5, line 51, *switch*; Figure 1A, **120**) to provide an

intermediate service additional to an information processing service (column 5, line 54-56) between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing said information processing service through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) receiving said information processing service, said program enabling said computer to perform:

a first process of acquiring state information (column 6, lines 20-23, *receives a report*) required to maintain the state of an existing session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device for said information processing service (column 9, lines 2-3), from said first information processing device or said second information processing device (column 9, lines 2-3);

a second process of generating, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transferring the data of said information processing service to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*);

a third process of maintaining the state of said existing session (column 6, lines 20-23, *forwarding table*) between said intermediate device and said second information processing device (column 6, lines 18-20), establishing a new session between said

intermediate device and said first information processing device (column 6, lines 25-28; column 22, lines 30-43), and transferring said data of said information processing service using said existing session and said new session, according to said transfer rules (column 6, lines 34-38; column 22, lines 30-43).

But does not disclose actively requesting and obtaining said state information.

However, Davies discloses actively requesting and obtaining said state information (column 8, lines 37-39).

It would have been obvious to one skilled in the art at the time the invention was made to combine the transparent hand-off protocol of Lee with the status requests of Davies. The motivation being, to improve accuracy of the method by allowing for periodic updates, of the statuses between servers and clients, across routing nodes.

Response to Arguments

41. Applicant's arguments with respect to claim 1-35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

42. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLAKE RUBIN whose telephone number is (571) 270-3802. The examiner can normally be reached on M-R: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.\

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

5/12/09

/Rubin Blake/
Examiner, Art Unit 2457

/ARIO ETIENNE/
Supervisory Patent Examiner, Art Unit 2457